

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 4-8, 13-17, 20-24, 29-32 and 39-40 are pending, with claims 1 and 17 amended by the present amendment. Claims 1 and 17 are independent.

In the Official Action, claims 1, 4-8, 13-17, 20-24 and 29-32 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Chen (U.S. Patent Pub. No. 2003/0005161), Sato (U.S. Patent No. 5,884,004) and Choi (U.S. Patent Pub. No. 2003/0236905).

Applicant notes that the Official Action misidentifies the publication number of the Choi reference (02369005 rather than 0236905). Appropriate correction is requested.

Claims 1 and 17 are amended to more clearly describe and distinctly claim Applicant's invention. Support for this amendment is found in Applicant's originally filed specification. No new matter is added.

Briefly recapitulating, claim 1 is directed to

A method of reproducing, by a content reproducing device, content information stored on a recording medium, the method comprising:

reproducing *a first stream of data read out from the recording medium* in synchronization with *a second stream of data received from a content providing server over a network based on a first command sent from the content reproducing device to the content providing server*, the first stream of data comprising audio/video data and the second stream of data comprising content data associated with the first stream of data;

sensing a failure in receiving the second stream of data; and

upon sensing the failure, *re-synchronizing the first stream of data with the second stream of data based on information for synchronization or re-synchronization included in the second stream of data, thereby reproducing the first stream of data together with the second stream of data*, the information including data rate information of the second stream of data and/or size information of the second stream of data.

Chen describes a method for recovering from a failed synchronization session between a computing device (e.g., a personal computer or PDA) and a server. FIG. 4 of Chen is a graphical representation of one embodiment of client synchronization data 323 exchanged during a synchronization session. Here, the synchronization data 323 includes a client request 324 and a client response 326. The client request 324 includes a sync key 402 and a client manifest 404.

The synchronization application 342 uses a synchronization state table 344 for synchronization and to perform incremental updates to the mobile device 320 to resynchronize the mobile data 322 and the server data 312 after a failed synchronization session without re-transmitting the entire server data 312 to the mobile device 320.

The client manifest 404 identifies information that has changed in the mobile data 322 since the last successful synchronization session or may identify information that the mobile device 320 wants from the server data 312. For example, in one embodiment, if the client manifest 404 is null, the synchronization application 342 sends all the currently stored server data 312 to the mobile device 320 to store as mobile data 322.

FIG. 5 of Chen is a graphical representation of server synchronization data 350 exchanged between the synchronization application 342 and the information server 310 during a synchronization session. Once a client request 324 for synchronization is received, the synchronization application 342 sends a server sync request 353 to the information server 310.

The server sync request 353 includes a watermark 505 and an incremental update 506. The watermark 505 identifies the last successful synchronization transaction so that the information server 310 knows which new data must be sent. The incremental update 506 corresponds to changes that were made from the synchronization application 342 to the information server 310 since the last synchronization session.

However, Chen does not disclose or suggest Applicant's claimed first and second streams of data. Indeed, neither the word "stream" nor synonyms for streams are present in Chen. Accordingly, Chen does not disclose or suggest re-synchronizing a first stream of data [from a recording medium] with a second stream of data [from a server]. The concept of "resynchronizing" is only used once in Chen ("...the synchronization application 342 can perform incremental updates to the mobile device 320 to resynchronize the mobile data 322 and the server data 312 after a failed synchronization session without re-transmitting the entire server data 312 to the mobile device 320.) Chen does not describe that mobile data 322 is a data stream. In fact, Chen describes mobile data 322 as being a mobile data store maintained in a non-volatile storage 268. Chen further describes mobile data 322 (and the server data 312) as being e-mail or other messages used by an e-mail application, contact information used by a PIM, appointment information used by a scheduling program, and the like. Indeed, Chen only describes that once the server data 312 is changed, the mobile data 322 and server data 312 are no longer identical (i.e., data is not synchronized). In order for the mobile data 322 and the server data 312 to become identical (i.e., synchronized), typically, the mobile device 320 initiates a synchronization session. Thus, Chen only resynchronizes databases or other data that is not stream data.

Sato describes a bit stream generating method for generating a bit stream containing a plurality of video objects (VOB) including video data and audio data stored on an optical disc (M). Sato describes a method and apparatus enabling seamless data reproduction using an optical disk having a data structure whereby data is shared between plural titles to efficiently use the available optical disk space, as well as "multi-angle scene reproduction."

Sato notes that because MPEG video data is compressed with variable length coding, the data quantity in each group-of-pictures (GOP) is not constant. The video and audio decoding times also differ, and the time-base relationship between the video and audio data read from an optical disk, and the time-base relationship between the video and audio data output from the decoder, do not match. Thus, Sato provides a method for time-base synchronizing the video and audio data.

Sato further notes that when two MPEG system streams are seamlessly connected but the audio components of the two system streams are not contiguous, particularly immediately before and after the seam, it is necessary to pause the audio output to synchronize (resynchronize) the audio and video components of the system stream following the seam. To enable this resynchronization, audio reproduction stopping times 1 and 2 are declared in a DSI packet.

However, the two streams of Sato are not equivalent to Applicant's claimed first and second stream. The two streams of Sato are two streams from a common MPEG source (e.g., a recording medium), but separated by a seam (e.g., multiple video streams corresponding to multiple angles of the same scene, but sharing a common audio stream). Sato does not disclose or suggest a stream from a content providing server. Thus, Sato does not disclose or suggest

synchronizing, or resynchronizing, a first video stream from a recording medium with a second content stream from a content providing server.

Thus, like Chen, Sato fails to disclose or suggest re-synchronizing the first stream of data [from a recording medium] with the second stream of data [from a content providing server] based on information for synchronization or re-synchronization included in the second stream of data.

Choi describes a method of streaming media content from a server to at least one client. The method includes: establishing a streaming media connection between the server and the at least one client; streaming the media content from the server to the client; receiving, by the client, the streamed media content from the server; sending a reconnect request from the client to the server if the streaming is interrupted; receiving, by the server, the reconnect request from the client; re-establishing the streaming media connection with the client; and continuing with the streaming the media content and the receiving the streamed media content.

However, none of the applied references disclose or suggest re-synchronizing the first stream of data with the second stream of data based on information for synchronization or re-synchronization included in the second stream of data, thereby reproducing the first stream of data together with the second stream of data. Chen only resynchronizes copies of databases or other data that is not stream data. Contrary to the Official Action, Chen does not synchronize any type of stream of data.

Furthermore, the two streams of Sato are two streams from a common MPEG source (e.g., a recording medium), but separated by a seam (e.g., multiple video streams corresponding to multiple angles of the same scene, but sharing a common audio stream). Similarly, in Choi, a

first received portion a stream is resynchronized with an interrupted portion of the same stream. None of the applied references describe reproducing the first stream of data together with the second stream of data. Accordingly, none of the applied references disclose or suggest “a first stream of data read out from the recording medium in synchronization with a second stream of data received from a content providing server over a network.” Thus, for a first reason, Applicant submits that claims 1 and 17 patentably define over the applied references.

Furthermore, contrary to the Official Action, none of the applied references disclose or suggest Applicant’s claimed feature of “the information including data rate information of the second stream of data and/or size information of the second stream of data.” The Official Action asserts that the stopping times of Sato are equivalent to Applicant’s claimed data rate information of the second stream of data and/or size information of the second stream. Applicant traverses. Nothing about the applied times are directly or tangentially related to rate or size information, let alone rate or size information of a second stream (received from a content providing server over a network) so as to synchronize with a first stream (read out from the recording medium.) Thus, for a second reason, Applicant submits that claims 1 and 17 patentably define over the applied references.

As none of the cited art, individually or in combination, discloses or suggests at least the above-noted features of independent claims 1 and 17, Applicant submits the inventions defined by claims 1 and 17, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.¹

¹ MPEP § 2142 “...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations.

Turning now to dependent claims 6 and 22, contrary to the Official Action, Sato does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and the second stream of data is muted and not reproduced. The cited portion of Sato only describes a problem, and not a solution, let alone Applicant's recited claim features. Thus, for independent reasons, claims 6 and 22 patentably define over the applied references.

Turning now to dependent claims 7 and 23, contrary to the Official Action, Sato does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and an interpolated second stream of data is reproduced. The cited portion of Sato describes pausing audio to enable resynchronization. The cited portion does not disclose or suggest delaying resynchronization itself, let alone reproducing the first stream of data and reproducing interpolated second stream data. Thus, for independent reasons, claims 7 and 23 patentably define over the applied references.

Turning now to dependent claims 8 and 24, contrary to the Official Action, Chen does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and a previous segment of the second stream of data is reproduced. Incremental updates (based on when a terminal is connected to the network or based upon a user selection) are not equivalent to reproducing a first stream and a previous segment of a second stream. In Chen, when the devices are not connected, there is only one source of data. Chen does not store two copies of the email archive. That is, Chen does not store the mobile terminal's copy and a copy of a previously received version of the server's email archive. Thus, Chen does not disclose or suggest reproducing a first stream

and a previous segment of a second stream. Thus, for independent reasons, claims 8 and 24 patentably define over the applied references.

Turning now to dependent claims 13 and 29, contrary to the Official Action, Sato does not disclose or suggest a) calculating an offset value for the second stream of data to establish re-synchronization; b) sending a second command requesting transmission of the second stream of data corresponding to the calculated offset value from the content producing device to the content providing server; and c) re-synchronizing the second stream of data transmitted in response to the second command with the first stream of data read out from the recording medium. First, as noted above, Sato does not synchronize a first stream with a stream from a remote server. Second, the audio start gap of Sato is not calculated, but is pre-established on the DVD of Sato. Third, the audio start gap of Sato is not used in a command. Fourth, the request to synchronize/resynchronize in Chen does not include a calculated offset value. Accordingly, Sato and Chen fail to disclose or suggest the features of dependent claims 14-16 and 30-32. Thus, for independent reasons, claims 13-16 and 29-32 patentably define over the applied references.

Turning now to dependent claims 39-40, both Sato and Chen fail to disclose or suggest buffering the second stream of data [from the content providing server] prior to synchronization. Thus, for independent reasons, claims 39-40 patentably define over the applied references.


CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael E. Monaco, Reg. No. 52,041, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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